



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Goddard et al. (as amended)
Appl. No.	:	10/036,342
Filed	:	December 26, 2001
For	:	POLYPEPTIDES THAT INDUCE CELL PROLIFERATION (as amended)
Examiner	:	Kolker, Daniel E.
Group Art Unit	:	1649

DECLARATION UNDER 37 CFR §1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

We declare and state as follows:

1. We are the inventors of the invention claimed in the above-captioned patent application.
2. During the time period in which we participated in the events and activities described herein, we were employed by Genentech, Inc., the assignee of the above-captioned application.
3. All of the events and activities described herein were performed by us personally, or by others at our direction as part of our duties as employees of Genentech, Inc.
4. The invention claimed in the above-captioned patent application was conceived and reduced to practice in the United States prior to November 10, 1999 as described below.
5. Prior to November 10, 1999, we conceived of the invention claimed in the above-captioned patent application. This is demonstrated by the attached sequence printout (Exhibit A), which was generated prior to November 10, 1999, and which shows the complete sequence of the nucleic acid having the sequence of SEQ ID NO: 56. The attached printout also shows the complete sequence of the polypeptide which has the sequence of SEQ ID NO: 57. As evidenced by the sequence printout, we were in possession of the complete nucleic acid and amino acid sequences prior to November 10, 1999.
6. The date deleted from Exhibit A is prior to November 10, 1999. This date was redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.
7. After these initial experiments, we diligently reduced the claimed subject matter to practice by working to express and purify the encoded polypeptide and to run it systematically

Appl. No. : 10/036,342
Filed : December 26, 2001

through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (e.g., PIN1205-1), and this protein is a polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, actual reduction to practice occurred on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

10. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequences of SEQ ID NO:56 and SEQ ID NO:57, as well as the data showing the ability to induce mesangial cell proliferation. That application was filed on March 1, 2000 as PCT/US00/05601.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: A. Goddard Date: 19 Oct 05
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: _____
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

Appl. No. : 10/036,342
Filed : December 26, 2001

through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (e.g., PIN1205-1), and this protein is a polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, actual reduction to practice occurred on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

10. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequences of SEQ ID NO:56 and SEQ ID NO:57, as well as the data showing the ability to induce mesangial cell proliferation. That application was filed on March 1, 2000 as PCT/US00/05601.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: 10/18/05
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: _____
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

Appl. No. : 10/036,342
Filed : December 26, 2001

through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (e.g., PIN1205-1), and this protein is a polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, actual reduction to practice occurred on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

10. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequences of SEQ ID NO:56 and SEQ ID NO:57, as well as the data showing the ability to induce mesangial cell proliferation. That application was filed on March 1, 2000 as PCT/US00/05601.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: 10/18/05
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

Appl. No. : 10/036,342
Filed : December 26, 2001

through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (e.g., PIN1205-1), and this protein is a polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, actual reduction to practice occurred on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

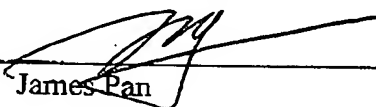
10. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequences of SEQ ID NO:56 and SEQ ID NO:57, as well as the data showing the ability to induce mesangial cell proliferation. That application was filed on March 1, 2000 as PCT/US00/05601.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: Oct 24/05
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

Appl. No. : 10/036,342
Filed : December 26, 2001

through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (e.g., PIN1205-1), and this protein is a polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, actual reduction to practice occurred on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

10. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequences of SEQ ID NO:56 and SEQ ID NO:57, as well as the data showing the ability to induce mesangial cell proliferation. That application was filed on March 1, 2000 as PCT/US00/05601.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: _____
James Pan

By: Colin K. Watanabe Date: Oct 20, 2005
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

Appl. No. : 10/036,342
Filed : December 26, 2001

through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (e.g., PIN1205-1), and this protein is a polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, actual reduction to practice occurred on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

10. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequences of SEQ ID NO:56 and SEQ ID NO:57, as well as the data showing the ability to induce mesangial cell proliferation. That application was filed on March 1, 2000 as PCT/US00/05601.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____
Audrey Goddard

Date: _____

By: _____
Paul J. Godowski

Date: _____

By: _____
Austin L. Gurney

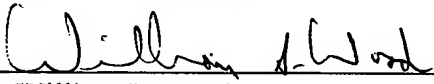
Date: _____

By: _____
James Pan

Date: _____

By: _____
Colin K. Watanabe

Date: _____

By:  _____
William I. Wood

Date: 10/19/05

EXHIBIT A

```

>Thursday, April 28, 2005
>DNA92234 [Full]
>887 Sites [All Sites]
> {DNA92234}, sheldens
> Lib309
>Sequence confirmed by phredphrap

```

```

      thai
      nlaiII  snaBI
      sphi  fndIII/mvnI
      nspHI bstUI taiI
      taiI nspI bsh1236I
      maeII/hpyCH4IV bslWI/spLI
      aluI hinII/acyI cac8I  bsaAI
      tsp45I  sapi  ahaII/bsaHI mlul isaI  hpy188I  ecorI  tliI
      maeIII  mboII  aatII  cac8I  aflIII  maeII/hpyCH4IV  paeR7I  smlI
      hphi  sfci  earI/ksp632I  hpy99I  hpyCH4V  csp6I  aluI  apoI  avai[M.taqI-]  mnlI  fnu4HI/bsaFI  hpy18
      1 TAGGTGACAC TATAGAAGAG CTATGACGTC GCATGCRCGC GTACGTAAGC TCGGAATTGC GCTCGAGGAA TGAATACCTC CGAAGCCGCT TTGTTCTCCA
      ATCCACTGTG ATATCTTCTC GATACTGCAG CGTACGTGG. CATGCATTGC AGCCTTAAGC CGAGCTCCTT ACTTATGGAG GCTTCGGCGA AACAAAGAGT
      ^insert starts here

```

```

scrFI[M.hpaII-]
ncdI
mspI
hpaII
dsav
bpuAI bssKI bsp1286
bbsI bslI bsmFI talI bmyI
aluI mnlI mboII bsaJI maeII/hpyCH4IV msel maeIII nla
101 GATGTGAATA GCTCCACTAT ACCAGCCTCG TCTTCTCTCC GGGGACAAC GTGGGTCAGG GCACAGAGAG ATATTTAATG TCACCTCTTT GGGGCTTTCA
CTACACTTAT CGAGGTGATA TGGTCGGAGC AGAAGGAAGG CCCCCTCTTG CACCCAGTCC CGTGTCTCTC TATAATATAC AGTGGGAGAA CCCCAGAAAGT

```

```

sau3AI
mboI/ndelII[dam-]
dpnII[dam-]
dpmI[dam+]
alwI[dam-]
nlaIV
pleI mnlI bstYI/xhoII hgaI
mlyI rmaI bamHI bslI tseI
hinfi maeI hpy188I bstXI alwI[dam-] hpy188III fnu4HI/bso
bsmFI mnlI bfaI eco57I bpmI/gsuI[dcm-] bslI avai bbvI bsmFI
201 TGGGACTCCC TCTGCCACAT TTTTGGAGG TTGGGAAAGT TCTAGAGGC TTCAGAACTC CAGCCTAATG GATCCCAAC TCGGAGAGAT GGCTGCCGTCC
ACCTGAGGG AGACGGTETA AAAAACCCTCC AACCTTTCA ACGATCTCCG AAGTCTTGAG GTGGGATAC CTAGGGTTG AGCCTCTTA CCGACGCAGG
M D P K L G R M A A S
^MET

```

```

fnu4HI/bsoFI
tseI      acII
tseI      mwoI      thai nlalII      haeII
mwoI      fnu4HI/bsoFI      nsphI      mspi
fnu4HI/bsoFI      fnuDI/mbvI      scrFI[M.hpaII-]
bbvI      bbvI      bstUI[M.hhaI-]      nciI
tseI      tseI      bsh1236I      dsav hinPI      bpuAI      ms
mwoI      fnu4HI/bsoFI      hinPI      hphI      mwoI hpaII      bbsI      rsaI      mnII
fnu4HI/bsoFI      hhaI/cfoI      mnII      acII bssKI      xmnI mboII      csp6I      ecoNI
cac8I      bbvI      bpmI/gsuI[dcM-]      bseRI      mnII bsaJI hhaI/cfoI      asp700      bsrI      bslI
301 CTGCTGGCTG TGTCTGCTGT GCTGCTGGAG CGGGGCTGT TCTCTCACC CTCCTGCCC CCGGGCTGT TAGAGAAAT CTTCAGTAC ATTGACCTCC
GACGACCGAC ACACGACGA CGACGACCTC GGGCCGTACA ACAGGATGG GAGGGCGGG GCGCGCGACA ATCTCTTCA GAAGTCATG TAAGTGGAGG
12 L L A V L L L L L E R G M F S S P S P P P A L L E K V F Q Y I D L H

mboII
earI/ksp632I
sapI
aluI
sstI
sacI
tth111I/aspI
pleI
apoI      alwNI[dcM-]      haeII/paII      pf1FI
fokI tsp509I      alw26I/bsmAI      mscI/baII      mlyI
bstF5I      hpyCH4V      eaeI      taqI      hinFI      hpy188I
hpy188III      bsgI hgaI eco57I      cfrI      hpy188III      mnII eco57I      banII[M.aluI-]      cf
401 ATCAGGATGA ATTTGTGCAG ACGCTGAAGG AGTGGGTGGC CATCGAGAGC GACTCTGTCC AGCCTGTGCC TCGCTTCAGA CAAGAGCTCT TCAGAAATGAT
TAGTCCTACT TAAACACGTC TCGGACTTCC TCACCCACCG GTAGCTCTCG CTGAGACAGG TCGGACACGG AGCGAGTCT GTTCTCAGA AGTCTTACTA
46 Q D E F V Q T L K E W V A I E S D S V Q P V P R F R Q E L F R M M

```

```

mwol
scrFI[dcn-]
pspGI sau96I[M.haeIII-]
mvaI pspOMI/bsp120I
ecORI[dcn-]
dsav[dcn-]
bstNI nlaIV
bsaKI[dcn-]
hinPI bsp1286[M.haeIII-]
hhai/cfoI sfiI
tseI bsaJI bmyI
fnu4HI/bsoFI sau96I[M.haeIII-]
bbvI apyI[dcn+]
hpyCH4V banII[M.haeIII-]
sfcI haeII apaI mnlI
bsaJI acII tseI alwNI[dcn-] haeIII/palI bsaJI
mwol fnu4HI/bsoFI pstI[M.HI-] nlaIV haeIII/palI
bceAI bbvI fnu4HI/bsoFI eco0109I/draII
haeIII/palI bbvI alw26I/bsmAI bglI[M.haeIII-] pshAI avaII alw26I/bsmAI hpy188I mnlI
501 GCGCGTGGCT GCGGACACGC TGCAGCGCCT GGGGGCCCGT GGGCGCTCGG TGGACATGGG TCCTCAGCAG CTGCCCGANG GTCAGAGTCT TCCATATACCT
CGGCACCGA CGCCTGTGG ACCTCGCGGA CCCCCGGCA CACCGGAGCC ACCTGTACCC AGGATCGTC GACGGGCTAC CAGTCTCAGA AGGTATGGA
79. A V A A D T L Q R L G A R V A S V D M G P Q Q L P D G Q S L P I P

```

```

eaeI[dcM-]
scrFI[dcM-]
pspGI
nvaI
ecorII[dcM-]
dsav[dcM-]
bstNI bslI
bssKI[dcM-]
apyI[dcM+]
fokI cfrI bsrI
bstF5I haeIII/palI
601 CCGTCATCC TGGCCGAAC TGGGAGCGAT CCCACGAAAG GCACCGTGTG CTTCTACGGC CACTTGGCAG TGCAGCCTGC TGACCGGGGC GATGGGTGGC
GGCAGTAGG ACCGGCTTGA CCCTCGCTA GGTGCTTTC CGTGGCACAC GAAGATGCCG GTGACCTGC ACGTGGGACG ACTGGCCCGC CTACCCACCG
112 P V I L A E L G S D P T K G T V C F Y G H L D V Q P A D R G D G W L

scrFI[M.hpaII-]
nciI
tseI
fnu4HI/bsoFI mspI
haeIII/palI
bsgI cac8I hpaII
tail bbvI dsav
maeiI/hpyCH4IV bssKI
btri hpyCH4V bsaJI
bsaJI
sau3AI mwoI
bslI
sau96I[M.haeIII-] dpnII[dam-] hi
haeIII/palI dpnI[dam+] hh
eco0109I/draII alwI[dam-] hae
accI
mnlI mcrI
bsaRI bsiEI
eco0109I/draII
701 TCACGGACCC CTATGTGCTG ACGGAGTAG ACGGGAAACT TTATGACGA GGAGCGACCG ACACAAAGG CCTGTCTTG GCTTGGATCA ATGCTGTGAG
AGTGCTTGGG GATACACGAC TGCTCCATC TGCCCTTGA AATACCTGT CCTGCTGGC TGTGTTTCC GGGACAGAAC CGAACCTAGT TACGACATC
146 T D P Y V L T E V D G K L Y G R G A T D N K G P V L A W I N A V S

```

```

scrFI[dcn-]
pspGI
mvaI      sau3AI
ecorII[dcn-]
dsav[dcn-] mboI/ndeII[dam-]
bstNI     dpnII[dam-]
bsp1286   bstYI/xhoII
bmyI bssKI[dcn-] mboII
hpy188I apyI[dcn+] dpnI[dam+]
eco57I bsaJI bglII
mwoI banII bpmI/gsuI[dcn-]
801 CGCCTTCAGA GCCCTGGAGC AGATCTTCC TGTGAATATC AATTATATC TTGAGGGGAT GGAAGAGGCT GGCCTCTGTG CCCTGGAGGA ACTTGTGGAA
GCGGAAGTCT CGGGAACCTCG TTCTAGAAGG ACACCTTATAG TTTAAGTAGT AACTCCCTCA CCTTCTCCGA CCGAGACACAC GGGACCTCCT TGRACACCTT
179 A F R A L E Q D L P V N I K F I I E G M E E A G S V A L E E L V E

mnlI
bpmI/gsuI[dcn-]
scrFI[dcn-]
pspGI
mvaI
ecorII[dcn-]
dsav[dcn-]
bstNI
bsaJI
fokI mboII cac8I
bstF5I mnlI
tsp509I
apoI mnlI earI/ksp632I
bsaJI
CCCTGGAGGA ACTTGTGGAA
GGGACCTCCT TGRACACCTT
L E E L V E

```

```

scrFI{
ncII
mspI
hpaII
dsav
bssKI
bsaJI
xmaI/ps
smaI
scrFI{M
ncII
dsav
bssKI
bsaJI
aval{M.
nlaIV
sau3AI
mboI/ndeII{dam-}
dpmII{dam-}
dpmI{dam+}
alwI{dam-}
cac8I
tsp509I
hpy188I
901' AAAGAAAAGG ACCGATTCTT CTCTGGTGTG GACTACATTG TAATTTCAGA TAACCTGTGG ATCAGCCCAA GGAAGCCAGC ATCACTTAT GGAACCCGGG
TTTCTTTTCC TGGCTAAGAA GAGACCACAC CTGATGTAAC ATTAAGTCT ATGGACACCC TAGTCGGTTT CCTTCGGTCG TTAGTGAATA CCTTGGGCC
212 K E K D R F F S G V D Y I V I S D N L W I S Q R K P A I T Y G T R G

```

```

scrFI[dcm-]
pspGI
mvaI
ecorII[dcm-]
dsaV[dcm-]
bstNI
bssKI[dcm-]
bsmAI
bsaI
hphI
nlaiII mnlI hpyCH4V apyI[dcm+] bspCNI
ddei nlaIV
hpy188III
fokI rcaI
nlaiII
sau3AI sap
mboI/ndeII[da
dpnII[dam-]
dpnI[dam+] ea
1001 GGAACAGCTA CTTCATGCTG GAGGTGAAAT GCAGAGACCA GGATTTTCAC TCAGGAACCT TTGGTGGCAT CCTTCATGAA CCAATGGCTG ATCTGGTTGC
CCTTGTGAT GAAGTACCAC CTCCACTTTA OGTCCTGCTT CCTAAAAGTG AGTCCTTGGA AACCCCGTA GGAAGTACTT GGTACCGAC TAGACCCACG
246 N S Y F M V E V K C R D Q D F H S G T F G G I L H E P M A D L V A

```

```

scrFI[dcm-]
pspGI
mvaI
ecorII[dcm-]
dsaV[dcm-]
bstNI
bsaKI[dcm-]
sau96I[dcm-]
nlaIV
avaII[dcm-]
scrFI[dcm-]
pspGI apyI[dcm+]
mvaI bsmFI
ecorII[dcm-]
dsaV[dcm-]
bstNI bsaJI
bsaKI[dcm-] tfII xmnI nlaIV mboII
apyI[dcm+] hinfI asp700 mnlI earI/ksp632I
mboII
1101 TCTTCTCGGT AGCCTGCTAG ACTCGTCTGG TCATATCCTG GTCCTCGGAA TCTATGATGA AGTGGTTCCT CTACAGAAG AGGAAATAAA TACATACAAA
AGAAGAGCCA TCGGACCATC TGAGCAGACC AGTATAGGAC CAGGACCTT AGATACTACT TCACCAAGGA GAATGCTTC TCCTTTATTT ATGTATGTTT
279 L L G S L V D S S G H I L V P G I Y D E V V P L T E E I N T Y K

```

```

rsal
csp6I
nlaIV
kpnI
bani
asp7I8
bpmI/gsuI[dcM]
hpy188III
mnli acc65I
mnli hpyCH4V mnli
312 A I H L D L E E Y R N S S R V E K F L F D T K E E I L M H L W R Y P

scrFI[M.hpaII-]
ncfI
mspI
hpaII
dsav
bssKI
tseI
mspI
fokI hpy188III mboII hpaII fnu4HI/bsoFI tsp509I
bstF5I bfaI bsaWI bbvI apoI taqI ddeI bseRI hinfI hpyCH4V mnli
1201 GCCATCCATC TAGACCTAGA AGAATACCGG AATAGCAGCC GGGTTGAGA ATTTCTGTTC GATACATAGG AGGAGATTCT AATGCACCTC TGGAGGTACC
CGGTAGGTAG ATCTGGATCT TCTTATGGCC TTATCTCGG CCCAACTCTT TAAAGACAAG CTATGATTCC TCCTCTAAGA TTACGTGGAG ACCTCCATGG
312 A I H L D L E E Y R N S S R V E K F L F D T K E E I L M H L W R Y P

haeIII/palI
eaeI[dcM-]
cfrI
thaI
fnuDI/mvnI scrFI[dcM-]
hinPI pspGI
mnli bstUI[M.hhaI-] mvaI
sau3AI hhaI/cfoI ecorII[dcM-]
mboI/ndeII[dam-][M.taqI-]
dpnII[dam-] dsav[dcM-] bstNI
dpmI[dam+] bssKI[dcM+] apyI[dcM+] xnnI
alwI[dam-] bsh1236I bssKI[dcM+] apyI[dcM+] asp700
nlaIII taqI[dam-] bst4CI/hpyCH4III
1301 CATCTCTTTC TATTCATGG ATCGAGGGG CGTTGATGA GCCTGGAAT AAAACAGTCA TACCTGGCCG AGTTATAGGA AAATTTCAA TCCGTCTAGT
GTAGAGAAAG ATAGTACCC TAGCTCCCGC GCRAACTACT CGGACCTTGA TTTTGTCACT ATGGACCGGC TCAATATCCT TTAAAGTT AGGCAGATCA
346 S L S I H G I E G A F D E P G T K T V I P G R V I G K F S I R L V

tsp509I bsm
apoI rmaI
xnnI maeI
bfaI

```

nlaiIII	tsp45I	maeIII	hphI	hpy188III	mboII	xmnI	asp700	bstXI	nlaiII	pl
mslI										ml
mslI										hi
mslI										
1401	CCCTCACATG AATGTCTCTG CGGTGGAAAA ACAGTGACA CGCATCTTG AGATGTGTT CTCCAAAGA AATAGTCCA ACAAGATGGT TGTTCCTATG									
	GGGAGTGTAC TTACACAGAC GCCACCTTT TGTCCACTGT GCTGTAGAAC TTCTACACAA GAGGTTTCT TTATCAAGT TGTCTACCA ACAAGGTAC									
379	P H M N V S A V E K Q V T R H L E D V F S K R N S S N K M V V S M									
tspRI										
	zmaI	dsal	btgl/bstDSI	sepi	bsaJI	hpyCH4V	bsaI	hpy188I	hpyCH4III	sau
	maeI									mbo
	bfaI									dnp
										dnp
										alw
1501	ACTCTAGGAC TACACCGGTG GATTGCAAT ATTGATGACA CCCAGTATCT CGCAGCAAAA AGAGCGATCA GAACGTGTT TGGACAGAA CCAGATATGA									
	TGAGTCCCTG ATGTGGGCAC CTACGTTTA TAACACTGT GGTGCTATGA GGTGCTATTA TGTGCTATTA ACCTTGTCTT GGTCTATCT									
412	T L G L H P W I A N I D D T Q Y L A A K R A I R T V F G T E P D M I									

```

sau3AI
mboI/ndeII[dam-]
dpnII[dam-]
fokI dpnI[dam+]
bstF5I
serFI[M.hpaII-]
ncII alwI[dam-]
mspI nlaIV
hpaII bstYI/xhoII
dsav bamHI
bsKI alwI[dam-] muni/mfeI
tsp509I
1601 TCCGGGATGG ATCCACCAT TCCAATTGCCA AAATGTTCCA GGAGATCGTC CACAAGAGCG TGGTGTCTAAT TCCGTGGGA GCTGTGTATG ATGGAGAACA
AGGCCCTACC TAGGTGGTAA GGTAAACGGT TTTACAAGGT CCTCTAGCAG GTGTTCTCGC ACCACGATTA AGGCGACCT CGACAACTAC TACCTCTTGT
446 R D G S T I P I A K M F Q E I V H K S V V L I P L G A V D D G E H

sau3AI
serFI[dcM-]
pspGI mboI/ndeII[dam-]
mvaI dpnII[dam-]
ecorII[dcM-]
dsav[dcM-]
bstNI dpnI[dam+]
bsKI[dcM-]
apyI[dcM+]
mwoI acI aluI
tsp509I
mspAlI/mspBII
1701 TTCGCAGAAAT GAGAAATCA ACAGGTGCA CTACATAGAG GGAACCAAT TATTGCTGC CTTTCTCTTA GAGATGGCC AGCTCCATTA ATCACAAGAA
AAGCGTCTTA CTCCTTTAGT TGTCCACCTT GATGTAATC CTTGCTTA ATAAAGCAG GAAAAGAA CTCTACCGGG TCGAGGTAAT TAGTGTCTT
479 S Q N E K I N R W N Y I E G T K L F A A F F L E M A Q L H O

trnU9I
tseI
nlaIV. fnu4HI/bsoFI
mnlI tsp509I bbvI ddeI
sau96I[M.haeIII-]
'haeIII/palI aseI/asnI/vspI
aluI mseI

```

sau3AI
mboI/ndelII[dam-]
dplII[dam-]
dplI[dam+]
hpy188I
sau3AI tspRI
hpy188I alwI[dam-]
xmaI mboI/ndelII[dam-] hphI
maeI dplII[dam-] tflI mnlI foki bfaI foki
bfaI dplI[dam+] hinfI[M.hphI-] bstFSI bstFSI
1801 CCTTCTAGTC TGATCTGATC CACTGACAGA TTCACCTCC CCACATCCCT AGACAGGGAT GGAATGTAAA TATCCAGAGA ATTGGGTCT AGTATAGTAC
GGAGATCAG ACTAGACTAG GTGACTGTCT AAGTGGAGG GGTGTAGGA TCTGTCCCTA CCTTACATTT ATAGGTCTCT TAAACCCAGA TCATATCATG

sau96I
nlaIV
avall bpyCH4V
ppuMI bsgI
ecoO109I/draII
tru9I tspRI
mseI bsmFI btsI
1901 ATTTTCCCTT CCATTAAAA TGCTTGGGA TATCTGGATC AGTAATAAA TATTCAAAG GCACAGATGT TGAATATGGT TTAAGTCC CCACGTGCACA
TAAAGGGAA GGTAAATTT ACAGAACCT ATAGACCTAG TCATTATTTT ATAAAGTTT CGTCTCTACA ACCTTACCA AATTCCAGG GGTGACGTGT

```

scrFI[dcn-]
pspGI
mvaI
ecorII[dcn-]
dsav[dcn-]
bstNI
bssKI[dcn-]
apyI[dcn+]
    bali      tfil
    hpyCH4V   bsaJI   hinfi
    2001 CCTTCCTCAA GTCATAGCTG CTTCGAGCAA CTTCGATTCC CCAAGTCCTG TCAATAGCC CCAGATTGG ATTCCTTCCA ACCTTTTAGC ATATCTCAA
    GGAAGGAGTT CAGTATCGAC GAAGTCGTT GAACATAAGG GGTTCAGGAC ACGTTATCGG GGTCTTAACC TAAGGAGGT TGAATAATCG TATAGAGTT

    sau96I      tsp4SI
    avaiI      bssSI
    ppuMI      hgiAI/asplI
    ecoO109I/draII bpy188III
    rmaI      bsp1286
    maeI      smlI   bsiHKA1      foki
    bfaI      mnlI   bmyI   maeIII      bstF5I   cpmI[dam+]
    hpyCH4V
    2101 CCTTGCATTT TGAATGGCAT AATCACTCGG GTTTCCTTC TAGTCTCTCA AGTCTCTGTG ACACATAATC ATTCCATCCA ATGATCGCCT TTGCTTTACC
    GGAAGTTTAA ACTAACCGTA TTAGTGAGGC CAACGAAAG ATCCAGGAGT TCACGAGCAC TGTGTATTAG TAAGTAGGT TACTAGCGGA AACGAAATGG

    tru9I
    msel
    aseI/asnl/vspI   bsaI      tsp8I
    2201 ACTCTTTTCTT TTTATCTTAT TAATAAATAAT GTTGTCTCC ACCACTGNCCT CCCAAAAA AAAAAA AAAAAA AAAAAA AAAAAA AAAAAA
    TGAGAAAGGA AAATAGAATA ATTATTTTA CAACGAGAGG TGGTGACNGA GGGTTTTTTT TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT

```

```

scrFI[M.hpall-]
ncII
mspI
hpall
dsav
bskI      sau96I rsal
xmaI/pspAI  rsrII/cspI
smaI      mroI  nlaIV
acII      scrFI[M.hpall-] cpoI kpnI hpyCH4V
          taqI nciI      hpy188III csp6I
          fnu4HI/bsoFI
          haeIII/palI      sstI salI dsav      bspMI  bani sfcI
          mcri      sacI hincII/hindII[M.taql-] avall[M.hpall-]
          eagI/xmaIII/ecrXI aluI accI[M.taql-] tru9I mspI asp718
          eaeI      hgiAI/aspHI[M.alul-] mseI bspEI cfr10I/bsrFI
          cfri      rmaI      ecli36II      bskI aseI/asnI/vspI acc65I cac8I
          bsiEI      maeI bsp1286[M.alul-] xnnI tsp509I bsaWI pstI
          notI      bfaI bsiHKAI bsaJI tsp509I bsaWI ageI sse8387I
          fnu4HI/bsoFI bmyI hpy99I avai(M.hpall-] hpall mspI bspMI rsal
          acII      speI banII[M.alul-] asp700 accIII hpall sbfI csp6I aluI sf
2301 AAAAAAAAAA AAGGGGGG AAGGGGGG CGCGGACTAG TGAGCTCGTC GACCCGGGAA TTAATTCGG ACCGGTACCT GCAGCGGTAC CAGCTTTCCC
TTTTTTTTTT TTTTTTTTTT TTTCCCGCCG GCGGCTGATC ACTCGAGCAG CTGGGCCCTT AATAAGGCC TGCCCATGSA CGTCCGCATG GTCGAAAGGG

```

```

pleI
mlyI
hinfI      aluI

```

```

2401 TATAGTAGT CGTATTAGAG CTGG
ATATCACTCA GCATAATCTC GAACC

```

> length: 2425

aatII (CAGTC) :	25	
acc65I (GGTACC) :	1295	2374
accI (GTMKAC) :	727	1117 2348
accIII (TCCGA) :	2366	
acII (CCGC) :	86	332 355 511 1420 1672 2326 2330
acyI (GRCGYC) :	25	
afIII (ACRYGT) :	37	
ageI (ACCGGT) :	2371	
ahaII (GRCGYC) :	25	
ahaIII (TTTAAA) :	1914	
aluI (AGCT) :	19	48 110 485 569 1006 1680 1781 2016 2343 2392 2419
alw26I (CAGNNCTG) :	418	523 565
alwI (GGATCNNNN) :	270	271 628 785 959 1319 1599 1609 1610 1817 1936
alwNI (CAGNNCTG) :	418	523 565
apaI (GGGCC) :	533	
apoI (RAATY) :	54	409 841 1249 1381 1879
apyI (CCWGG) :	528	609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
aseI (ATTAAAT) :	1787	2219 2360
asni (ATTAAAT) :	1787	2219 2360
asp700 (GAANNNTTC) :	375	1159 1379 1469 2358
asp718 (GGTACC) :	1295	2374
asphi (GNGCWC) :	484	2152 2342
aspi (GACNNNGTC) :	451	
avaI (CYCGRG) :	62	280 995 2353
avaII (GHWCC) :	559	705 909 1140 1985 2143 2369
balI (TGGCCA) :	437	
bamHI (GGATCC) :	270	1609
bani (GGYRCC) :	640	1295 2374

baniI (GRCYC) :	484 533 809 2342
bbsI (GAAGACNNNNN) :	130 379 587
bbvI (GCAGC) :	292 312 315 318 321 508 519 522 567 570 672 1235 1552 1756 2017 2024
bceAI (ACGGCNNNNNNNNNN) :	502 656
bfaI (CTAG) :	243 1210 1216 1396 1504 1805 1849 1889 2140 2337
bglI (GCCNNNNNGGC) :	535
bglII (AGATCT) :	822
bmyI (GDGCHC) :	159 484 533 809 2152 2342
bpmI (CTGCAG) :	96 258 325 814 883 1290
bpuAI (GAAGACNNNNNN) :	130 379 587
bsaAI (YACGTR) :	42
bsaHI (GRCGYC) :	25
bsaI (GGTCTCNNNNN) :	1034 2234
bsaJI (CCNNGG) :	139 359 503 528 545 684 812 881 995 996 1143 1516 2060 2353
bsaWI (WCCGGW) :	1226 2127 2366 2371
bseRI (GAGGACNNNNNNNNNN) :	342 749 1270
bsgI (GTGCAG) :	415 670 1994
bsh1236I (CGCG) :	38 331 1329
bsiEI (CGRYCG) :	755 2327
bsiHKA I (GWGCWC) :	484 2152 2342
bsiWI (CGTACG) :	40
bslI (CCNNNNNNNGG) :	135 184 274 275 354 396 614 631 771 1847 1848 2060
bsmAI (GTCTC) :	1034 2235
bsmAI (GTCTC) :	1034 2235
bsmFI (GGGACNNNNNNNNNNNNNNNN) :	143 202 297 1141 1399 1986
bsoFI (GCNGC) :	85 292 312 315 318 321 332 508 519 522 567 570 672 1235 1552 1756
	2017 2024 2326 2329
	533
bsp120I (GGGCC) :	159 484 533 809 2152 2342
bsp1286 (GDGCHC) :	563 1050
bspCNI (CTCAGNNNNNNNNNN) :	

bspEI (TCGGGA) :	2366
bspHI (TCATGA) :	1074
bspNI (ACCTGC) :	2377
bspMII (TCGGGA) :	2366
bsrFI (RCCGGY) :	2371
bsrI (ACTGGN) :	384 618 1542
bsaKI (CCNGG) :	139 360 528 609 684 813 882 995 996 1038 1113 1137 1144 1239 1342
	1363 1602 1638 2061 2353 2354
	2155
bsaSI (CTCGTG) :	643 1354 1573
bst4CI (ACNGT) :	641
bstAPI (GCANNNNTTGC) :	503 1516
bstDSI (CCRYGG) :	405 606 857 1068 1203 1605 1844 1857 2175
bstFSI (GGATG) :	528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
bstNI (CWGG) :	38 331 1329
bstUI (CGCG) :	260 1478
bstXI (CCANNNNTTGG) :	270 822 1609
bstYI (RGATCY) :	503 1516
btgI (CCRYGG) :	667
btrI (CACGTC) :	1992
btsI (GCAGTGNN) :	31 35 303 675 868 975 2020 2381
cac8I (GCNNGC) :	330 364 525 800 1328
cfoI (CGGC) :	2371
cfr10I (RCCGGY) :	437 500 611 657 1365 2327
cfrI (YGGCCR) :	2368
cpoI (CGGTCGG) :	41 387 1296 1897 2375 2387
esp6I (GTAC) :	2368
cspI (CGGTCGG) :	563 1050 1265 1767
ddeI (CTNAG) :	271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937
dpmI (GATC) :	2183

dpnII (GATC) : 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937
 2183
 draI (TTTAAA) : 1914
 draII (RGNCCY) : 532 558 768 1984 2142
 draIII (CACNNNGTG) : 642
 dsal (CCRYGG) : 503 1516
 dsaV (CCNGG) : 139 360 528 609 684 813 882 995 996 1038 1113 1137 1144 1239 1342
 1363 1602 1638 2061 2353 2354
 437 500 611 657 1365 2327
 eaeI (YGGCCR) : 2327
 eagI (CGGCCG) : 15 487 862 1100 1177
 earI (CTCTTCNNNN) : 484 2342
 ecl136II (GAGCTC) : 2327
 eclXI (CGGCCG) : 250 424 474 489 804
 eco57I (CTGAAG) : 396
 ecoNI (CCTNNNNNAGG) : 532 558 768 1984 2142
 ecoO109I (RGNCCY) : 54
 ecoRI (GAATTC) : 528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
 ecoRII (CCWGG) : 1929
 ecoRV (GATATC) : 85 292 312 315 318 321 332 508 519 522 567 570 672 1235 1552 1756
 fnu4HI (GCNGC) : 2017 2024 2326 2329
 38 331 1329
 fnuDI (CGCG) : 405 606 857 1068 1203 1605 1844 1857 2175
 foki (GGATG) : 96 258 325 814 883 1290
 gsuI (CTGGAG) : 363 524 799
 haeII (RGCCTY) : 438 501 534 543 612 658 769 1366 1776 2328
 haeIII (GGCC) : 295 420
 hgaI (GACGC) : 484 2152 2342
 hglAI (GAGCWC) : 330 364 525 800 1328
 hhaI (GCGC) : 330 364 525 800 1328
 hinPI (GCGC) :

hincII (GTYRAC):
 hindII (GTYRAC):
 hinfI (GANTC):
 hinfI (GRCGYC):
 hpaII (CCGG):
 hphI (GGTGA):
 hpy188I (TCNGA):
 hpy188III (TCNGA):
 hpy99I (CGWCG):
 hpyCH4III (ACNGT):
 hpyCH4IV (ACGT):
 hpyCH4V (TGCA):
 kpnI (GGTACC):
 ksp632I (CTCTTCNNNN):
 maeI (CTAG):
 maeII (ACGT):
 maeIII (GTNAC):
 mboI (GATC):
 mboII (GAAGA):
 mcrI (CGRYCG):
 mfeI (CAATTG):
 mluI (ACGCGT):
 mlyI (GAGTCNNNNN):
 mnlI (CCTC):
 mroI (TCCGGA):
 msci (TGGCCA):
 mseI (TTAA):
 mslI (CAYNNNRRTG):
 2348
 2348
 204 451 585 914 1120 1148 1275 1500 1829 2070 2407
 25
 139 361 684 996 1227 1239 1602 2128 2354 2367 2372
 3 181 346 1023 1434 1832
 51 79 252 476 491 582 806 946 1568 1809 1814
 97 281 402 443 1051 1074 1209 1289 1446 1873 1933 2156 2366
 27 2347
 643 1354 1573
 26 43 149 668
 34 416 521 671 1030 1283 1524 1995 2023 2051 2104 2380
 1295 2374
 15 487 862 1100 1177
 243 1210 1216 1396 1504 1805 1849 1889 2140 2337
 26 43 149 668
 4 180 1435 2158
 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937
 2183
 15 131 380 488 588 825 862 917 1101 1177 1219 1450
 755 2327
 1622
 37
 204 451 585 1120 1500 2407
 65 77 126 185 209 227 246 344 350 396 469 545 562 598 724 749 853
 865 886 1021 1168 1180 1270 1287 1293 1324 1402 1738 1835 2005 2146
 2366
 437
 175 1788 1915 1981 2220 2361
 400 1405 1407
 GSeqEdit, DNA92234 [Full], page 20

mspAI (CMGCKG) : 568 1672
mspI (CCGG) : 139 361 684 996 1227 1239 1602 2128 2354 2367 2372
munI (CAATTG) : 1622
mvaI (CCWGG) : 528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
mvnI (CGCG) : 38 331 1329
mwoI (GCNNNNNNNGC) : 303 312 315 321 357 502 535 641 650 793 802 1555 1665
nciI (CCSGG) : 139 360 684 995 996 1239 1602 2353 2354
ndeII (GATC) : 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937
2183
nlaIII (CATG) : 32 199 336 555 1014 1075 1315 1407 1497
nlaIV (GGNNCC) : 270 532 533 558 640 705 991 1054 1140 1164 1295 1609 1741 1985 2374
2326
notI (GGGCCCGC) : 568 1672
nspBII (CMGCKG) : 31 335
nspHI (RCATGY) : 31 335
nspI (RCATGY) : 62
paerJI (CTCGAG) : 438 501 534 543 612 658 769 1366 1776 2328
pali (GGCC) : 451
pflFI (GACNNNGTC) : 204 451 585 1120 1500 2407
pleI (GAGTCNNNN) : 558 1984 2142
ppuMI (RGWCCY) : 553
pshAI (GACNNNGTC) : 995 2353
pspAI (CCCGGG) : 528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
pspGI (CCWGG) : 533
pspOMI (GGGCCC) : 520 2379
pstI (CTGCAG) : 568
pvuII (CAGCTG) : 1074
zcal (TCATGA) : 243 1210 1216 1396 1504 1805 1849 1889 2140 2337
tmaI (CTAG) : 41 387 1296 1897 2375 2387
rsaI (GTAC) : 2368
rrsII (CGWCCG) :

sacI (GAGCTC) : 484 2342
salI (GTCGAC) : 2348
sapI (GCTCTTCNNNN) : 15 486 1099
sau3AI (GATC) : 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937
2183
sau96I (GGNCC) : 533 534 559 705 769 909 1140 1776 1985 2143 2369
sbfI (CTGTCAGG) : 2378
scrFI (CCNGG) : 139 360 528 609 684 813 882 995 996 1038 1113 1137 1144 1239 1342
1363 1602 1638 2061 2353 2354
1067
sfaNI (GCATC) :
sfci (CTRYAG) : 10 520 2379 2400
sfii (GGCCNNNNNGGCC) : 534
smaI (CCCGGG) : 995 2353
smlI (CTYRAG) : 62 2006 2147
snaBI (TACGTA) : 42
speI (ACTAGT) : 2336
sphI (GCATGC) : 31
splI (CGTACG) : 40
sse8387I (CCTGCAGG) : 2378
sspi (AATATT) : 1528 1949
sstI (GAGCTC) : 484 2342
tail (ACGT) : 26 43 149 668
taqI (TCGA) : 63 443 1259 1322 2349
tfii (GAWTC) : 914 1148 1275 1829 2070
thai (CGCG) : 38 331 1329
tliI (CTCGAG) : 62
tru9I (TTAA) : 175 1788 1915 1981 2220 2361
tseI (GCWGC) : 292 312 315 318 321 508 519 522 567 570 672 1235 1552 1756 2017 2024
tep45I (GTSAC) : 4 180 1435 2158
tsp509I (AATT) : 55 410 842 942 1250 1382 1623 1668 1748 1880 2107 2359 2363

tspRI (NNCAGTGN) :
tthI1II (GACNNNGTC) :
vspI (ATTAAT) :
xbaI (TTAGA) :
xhoI (CTCGAG) :
xhoII (RGATCY) :
xmaI (CCGGGG) :
xmaIII (CGGCCG) :
xmnI (GAANNNTTC) :

1574 1821 1992 2243
451
1787 2219 2360
1209
62
270 822 1609
995 2353
2327
375 1159 1379 1469 2358

not found:

acII (AACGT), afeI (AGCGCT), afII (CTTAAG), ahdi (GACNNNGTC), alw4I (GTGCAC), apalI (GTGCAC), ascI (GGCGGGCC),
avaII (ATGCAT), avII (TGCGCA), avrII (CCTAGG), baeI (NNNNNNNNNNNACNNNGTAYCNNNNNNNNN), bbrPI (CACGTG),
bcgI (NNNNNNNNNCGAANNNTTGCNNNNNNNNNN), bcIV (GTATCC), bcII (TGATCA), bfrBI (ATGCAT), bfrI (CTTAAG), blnI (CCTAGG),
blpI (CCTNAGC), bpul10Z (CCTNAGC), bsabI (GAATNNATC), bsaxI (NNNNNNNNNNNACNNNNNNNNNNNNNNNNNNNNNN), bsIC (TTTCGAA),
bsmBI (CGTCTCNNNN), bsmI (GAATGCN), bsp106 (ATCGAT), bsp1407I (TGTACA), bspCI (CATCG), bspDI (ATCGAT), bsrBI (GAGCGG),
bsrDI (GCAATGNN), bsrGI (TGTACA), bsSHII (GGCGGC), bst1107I (GTATAC), bstBI (TTTCGAA), bsteII (GGTNACC), bstZ17I (GTATAC),
bsu36I (CCTNAGG), celII (CCTNAGC), clai (ATCGAT), drdI (GACNNNNNGTC), eam1105I (GACNNNNNGTC), ecII (GGGGGA), eco47III (AGCGCT),
eco7ZI (CAGGTG), eco8II (CCTNAGG), sheI (GGCGCC), esp3I (CTCTC), espI (GCTNAGC), fseI (GGCGGGCC), fspI (TGCGCA), hindIII (AAGCTT),
hpaI (GTTAAC), kasI (GGCGCC), kspI (CCGGCC), mamI (GAATNNNATC), mstII (CCTNAGG), naeI (GGCGGC), narI (GGCGCC), ncoI (CCATGG),
ndeI (CATATG), ngomI (GGCGGC), nheI (GCTAGC), nrui (TGCGGA), nsII (ATGCAT), paci (TTAATTAA), pciI (ACATGT), pfIMI (CCANNNNNNTGG),
pmeI (GTTTAAAC), pmlI (CACGTG), ppulOI (ATGCAT), psiI (TTATAA), psp1406I (AACGTT), prui (CGATCG), sacII (CCGGGG), sandI (GGGWCCC),
sauI (CCTNAGG), scaI (AGTACT), sceI (TAGGATAACAGGTAAT), sexAI (ACWGGT), sfiI (TTTCGAA), sgfI (GCGATCGC), sgrAI (CRCCGGYG),
snoI (GTGCAC), snoI (GTGCAC), sfrI (GGCGGGC), sstII (CCGGGG), stuI (AGGCCT), styI (CCWGGG), swaI (ATTTAAAT),
xcmI (CCANNNNNNNNTGG)

GSeqEdit, DNA92234 [Full], page 23

EXHIBIT B

General Settings: ☐ Find New & Update ☐ SELECT ☐ ☐

Additional Parameters:

Assay Viewer

SFOI Assays

- AST1 Human Neural Hypertrophy
- AST2 Human Adult Hypertrophy
- AST3 Adipocyte Lipolysis
- AST4 Adipocyte Lipogenesis
- AST5 Hemopoietic stem cell proliferation
- AST6 Hippocampal Neuron Survival
- AST7 Human Neural Hypertrophy
- AST8 Human Neural Hypertrophy
- AST9 Human Neural Hypertrophy
- AST10 Human Neural Hypertrophy
- AST11 Human Neural Hypertrophy

Find Lots

ASTPIN
ASTDNA

Show Lots for:

ASTPIN
ASTDNA

Number:

1234

☐ Include UNQ Related Lots

Lots for Search

PRINT205-1

PRINT205-1

Date Complete Print

☐ All Positives ☐ Verified Positives ☐ Pending

ASSAY RESULT LIST

ASY	ASY Name	ASSAY	LOT	LOT Name	Pos	Verified	Cons	Cons Unit	Mean	Std	UNQ
AST1	Human Neural Hypertrophy	PRINT205-1	PRINT205-1	PRINT205-1	1	1	1.00	%	1.00	1.00	UNQ1813
AST2	Human Adult Hypertrophy	PRINT205-1	PRINT205-1	PRINT205-1	1	1	1.00	%	1.00	1.00	UNQ1813

Page 1 of 1

Rows 1 - 2 of 2

Select Page Page No. 1

Date Print

Date Complete

Comment

Printable Name
Human DPKL1813 pg
Human DPKL1813 pg

AST1 DNA | DOM | EXT | FEM | B-S | LB | LCT | MAP | QLI | PER | PRO | LAR | LERNA | BRG | UNQ | XEL | XST

Assay Viewer | Sequence Viewer | Data Viewer | Sequence Viewer | Data Viewer

Download Feedback